

These dyes are readily soluble in water, and the solutions are made by simply dissolving the dye in water, the proportion being about  $\frac{1}{8}$  ounce of dye to 1 pint of water. This solution can be diluted as much as ten times and still be effective. When the desired effect has been produced, which is usually in an hour or less, the flowers should be transferred to water. The solutions will keep for some days, and a pint of solution will color a large number of flowers.

While the artificial coloring of flowers in the manner described is of more or less interest from the scientific point of view, it has also a practical application. In decorative schemes where a particular color is selected, this method could be used for producing flowers all of one color. Or in some instances, where the demand for flowers of a certain color is greater than the supply, artificially colored flowers could be produced from white ones. Then again in the production of novelties, as of green carnations and green roses, the method can be utilized. The color produced by Naphtol Black B is a delicate gray or grayish-black, and it has been suggested that roses and carnations so colored would furnish appropriate mourning flowers. Another use of these dyes is in the coloring of wild flowers for decorative purposes. For example, wild carrot when colored with the blue dye gives a beautiful effect, being suggestive of a head of small forget-me-nots.

Finally it should be stated that the odor of flowers is not affected by this treatment, and that they keep as well as cut flowers ordinarily do. The colors are furthermore, permanent, and when the flowers are preserved in the dried condition, as is sometimes done with hydrangeas, a color can be selected according to the fancy, as blue, green, yellow, red, and so on.

PHILADELPHIA COLLEGE OF PHARMACY.

## A KEY TO THE AGARICEAE OF TEMPERATE NORTH AMERICA

BY WILLIAM A. MURRILL

The Agariceae are not ordinary gill-fungi, but are a subfamily of the Polyporaceae with furrowed hymenium. They differ from

the plants usually called agarics in being corky or woody instead of fleshy. Many of the species are very difficult because of the wonderful variations they undergo, especially in the appearance of the hymenium.

## KEY TO THE GENERA.

Context white.

Surface glabrous, hymenium usually labyrinthiform. A. AGARICUS.

Surface pubescent or hirsute.

Hymenium at first labyrinthiform, soon becoming irpiciform.

B. CERRENA.

Hymenium lamellate, not becoming irpiciform.

C. LENZITES.

Context brown.

Hymenophore sessile, furrows radiate.

D. GLOEOPHYLLUM

Hymenophore stipitate, furrows concentric.

E. CYCLOPORUS.

## A. THE SPECIES OF AGARICUS

1. Tubes one to several millimeters in transverse diameter; surface usually brown or discolored. 2.

Tubes less than one millimeter in transverse diameter; surface white or yellowish; plants confined to the southern states. *A. Aesculi* (Schw.) Murr.

2. Pileus thick, triangular, margin obtuse; tubes large, daedaleoid, dissepiments obtuse; context wood-colored; plants abundant on oak and chestnut.

*A. quercinus* L.

Pileus thick, triangular, margin obtuse; tubes large, daedaleoid, dissepiments obtuse; context white; plants rare on red cedar. *A. juniperinus* Murr.

Pileus thin, appanate, multizonate, margin very acute; hymenium poroid, daedaleoid or lamelloid, dissepiments acute. *A. confragosus* (Bolt.) Murr.

## B. THE SPECIES OF CERRENA

Surface hairy, hymenium soon splitting into numerous teeth; plants very common on dead deciduous wood. *Cerrina unicolor* (Bull.) Murr.

## C. THE SPECIES OF LENZITES

Surface tomentose, hymenium lamellate; very common on dead wood.

*Lenzites betulina* (L.) Fr.

## D. THE SPECIES OF GLOEOPHYLLUM

1. Context ferruginous to chestnut. 2.

Context avellaneous to umber, furrows only half a millimeter in width, surface usually azonate. *G. pallidofulvum* (Berk.) Murr.

2. Surface hirsute. *G. hirsutum* (Schaeff.) Murr.

Surface finely tomentose or glabrous. *G. Berkeleyi* (Sacc.) Murr.

## E. THE SPECIES OF CYCLOPORUS

A rare and remarkable plant, easily known by its concentrically furrowed hymenium and central stipe. *Cycloporus Greenii* (Berk.) Murr.

NEW YORK BOTANICAL GARDEN.